UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,604	07/11/2003	Michael R. Manzano	TPTC-1-1002	2950

25315 7590 07/09/2008

BLACK LOWE & GRAHAM, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER	
WU, QING YUAN	
ART UNIT	PAPER NUMBER
2194	

NOTIFICATION DATE	DELIVERY MODE
07/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary	Application No.	Applicant(s)	
	10/617,604	MANZANO, MICHAEL R.	
	Examiner	Art Unit	
	Qing-Yuan Wu	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to communications received March, 27 2008 and June 5, 2008. Claims 1-33 are pending.

Claim Rejections - 35 USC § 112

2. Claims 24 and 27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following claim language is indefinite:

i. As per claims 24, 27 and 30, it is uncertain which mobile-agent runtime environment is the "first" mobile-agent runtime environment in claim 30, given that the newly amended claim 24 now recites a mobile agent object migrates from presumably "another" mobile-agent runtime environment to "the" mobile-agent environment and again in claim 27 to a "second" mobile-agent runtime environment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-18 and 20-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (U.S. Patent 6,016,393) (hereafter White), in view of Saulpaugh et al. (US 7,016,966 B) (hereafter Saulpaugh).

5. As to claim 1, White teaches a method comprising:

a mobile agent object migrating from a first electronic device to a second electronic device comprising a host environment, operable to execute in a first electronic device, halt execution in the first electronic device at an execution state, be transplanted to a second electronic device, and resume execution from the execution state in the second electronic device [col. 7, line 35-col. 8, line 35];

after the mobile agent object migrates to the second electronic device, the mobile agent object requesting to perform an operation from the service environment [col. 22, lines 20-36; col. 26, line 7-col. 27, line 20; col. 61, line 53-col. 62, line 12].

6. White does not specifically teach the mobile object to discover services available in the host-computing environment as recited. However, Saulpaugh teaches requesting a service listing from the host environment, returning a service listing to the mobile agent object in response to the request for the service listing, determining if a particular service is within the returned service listing, requesting the particular service if the particular service is determined by the mobile agent object to be within the returned service listing [Saulpaugh, col. 23, line 23-col. 24, line 4; col. 47, lines 6 - 23; col. 48, lines 18 - 28].

7. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to combined the teaching of White with the teaching of Saulpaugh because they are in the same field of endeavor for optimizing a distributed computing system by minimizing network traffics through the use of process migration [col. 7, lines 10-31; Saulpaugh, col. 6, lines 14-18; col. 50, lines 46-56].

8. As to claim 2, White as modified teaches the invention substantially as claimed including:

the mobile agent object moving to a computing environment other than the host-computing environment in response to determining that the particular service is not within the returned service listing [Saulpaugh, col. 43, lines 1-9; col. 3, lines 17-25; col. 23, lines 53-66; col. 97, lines 29-43].

9. As to claim 3, White as modified teaches the invention substantially as claimed including:

the host environment providing the particular service to the mobile agent object [Saulpaugh, col. 43, lines 42-50]; and

the mobile agent object incorporating the particular service [Saulpaugh, col. 2, lines 59-60; col. 3, lines 9-16].

10. As to claim 4, White as modified teaches the invention substantially as claimed including:

the mobile agent object moving to a computing environment other than the host-computing environment in response to incorporating the particular service [Saulpaugh, col. 24, lines 1-4; col. 44, lines 18-49; col. 97, lines 29-43].

11. As to claim 5, White as modified teaches the invention substantially as claimed including:

the mobile agent object determining if a second particular service is within the returned service listing;

the mobile agent object requesting the second particular service if the second particular service is determined by the mobile agent object to be within the returned service listing;

the host environment providing the second particular service to the mobile agent object; and

the mobile agent object incorporating the second particular service [Saulpaugh, col. 102, lines 9-16; col. 47, lines 6-23; col. 48, lines 18-28; col. 43, lines 42-50; col. 2, lines 59-60; col. 3, lines 9-16].

12. As to claim 6, White as modified teaches the invention substantially as claimed including:

wherein the incorporated service comprises data [Saulpaugh, col. 16, lines 18-39].

13. As to claim 7, White as modified teaches the invention substantially as claimed including:

wherein the incorporated service comprises a process [Saulpaugh, col. 16, lines 18-39].

14. As to claim 8, this claim is rejected for the same reason as claim 1 above. In addition, White as modified teaches the invention substantially as claimed including:

the audit system detecting a request for a service by a mobile agent object [Saulpaugh, col. 27, lines 8-18];

the audit system generating an audit event in response to detecting the request [Saulpaugh, col. 27, lines 8-18, 60-66]; and

the audit system logging the audit event in a database [Saulpaugh, col. 27, lines 8-18].

15. As to claim 9, White as modified teaches the invention substantially as claimed including:

the audit system notifying at least one audit plug-in in response to logging the audit event [Saulpaugh, col. 27, lines 52-66].

16. As to claim 10, White as modified teaches the invention substantially as claimed including:

the audit plug-in retrieving data from the database in response to the notifying [Saulpaugh, col. 27, lines 52-66].

17. As to claim 11, White as modified teaches the invention substantially as claimed including:

wherein the request for a service is a request for a directory service [col. 36, lines 36-44; col. 47, lines 6-23].

18. As to claim 12, White as modified teaches the invention substantially as claimed including:

wherein the generating of an event comprises communicating with a processor in the host-computing environment using an application program interface [Saulpaugh, col. 19, lines 26 -27; col. 27, lines 8-18].

19. As to claim 13, White as modified teaches the invention substantially as claimed including:

the audit system detecting a second request for a service by a mobile agent object;

the audit system generating a second audit event in response to detecting the second request; and

the audit system logging the second audit event in a database [See the rejections of claims 1, 5 and 8].

20. As to claim 14, this claim is rejected for the same reason as claims 1 and 8 above.

21. As to claims 15-17, these claims are rejected for the same reason as claims 3, 9 and 10.

22. As to claim 18, this claim is rejected for the same reason as claim 1 above. In addition, White as modified teaches the invention substantially as claimed including:

a computer system for hosting a mobile agent object having discovery ability, the system comprising:

a processor operable to facilitate communications between computer systems coupled by a network [Saulpaugh, col. 1, lines 24-29; the processor is inherent]; and

a memory coupled to the processor [inherent to be able to store the programs], the memory comprising:

a mobile-agent runtime environment operable to host a mobile agent object [Saulpaugh, Fig. 7; col. 14, lines 50-62], the mobile agent object operable to execute in a first electronic device, halt execution in the first electronic device at an execution state, be transplanted to a second electronic device, and resume execution from the execution state in the second electronic device [Saulpaugh, col. 23, line 23-col. 24, line 4];

a discovery service object operable to list service objects available to a mobile agent object in response to a discovery request from the mobile agent object [Saulpaugh, col. 47, lines 6-23]; and

at least one service object operable to interact with the mobile agent object in response to a request for the at least one service object by the mobile agent [Saulpaugh, col. 2, lines 56-66; col. 48, lines 18-28].

23. As to claims 20 and 21, these claims are rejected for the same reason as claims 6 and 7 above.

24. As to claim 22, White as modified teaches the invention substantially as claimed including:

wherein the at least one service object comprises a second mobile agent object [Saulpaugh, col. 24, lines 1-4; col. 50, lines 29-45].

25. As to claim 23, White as modified teaches the invention substantially as claimed including:

wherein the at least one service object comprises a second discovery service object [Saulpaugh, col. 43 lines 42 - 50; col. 44 lines 18 - 49].

26. As to claim 24, this claim is rejected for the same reason as claims 8 and 18.

27. As to claims 25 and 26, these claims are rejected for the same reason as claims 9 and 10.

28. As to claim 27, White as modified teaches the invention substantially as claimed including:

a network interface controller [inherent to operate with a network] operable to facilitate the movement of the mobile agent object from the mobile-agent runtime environment to a second mobile-agent runtime environment [Figs. 4A-4B; Saulpaugh, col. 97, lines 29-43].

29. As to claim 28, White as modified teaches the invention substantially as claimed including:

the second mobile-agent runtime environment resides in a memory of one of the other computing environments [150A, 150X, Fig. 5A; Saulpaugh, Fig. 7; col. 14, lines 50-62; col. 97, lines 29-43].

30. As to claim 29, White as modified teaches the invention substantially as claimed including:

the second mobile-agent runtime environment resides in a second memory in the host-computing environment [150A, 150X, Fig. 5A; Saulpaugh, col. 14, lines 50-62; col. 97, lines 29-43].

31. As to claim 30, White as modified teaches the invention substantially as claimed including: the second mobile-agent runtime environment resides in a portion of the memory in the host-computing environment other than the portion of the memory where the first mobile-agent runtime environment resides [150A, 150X, Fig. 5A].

32. As to claim 31, this claim is rejected for the same reason as claim 18 above. In addition, White as modified teaches at least one service object within the first mobile-agent runtime environment operable to interact with the mobile agent object in response to a request for the service object by the mobile agent object [Saulpaugh, col. 43, lines 42-50] and multiple clients in multiple environments [Saulpaugh, col. 14, lines 33-62].

33. As to claims 32 and 33, these claims are rejected for the same reason as claim 1 above.

34. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over White and Saulpaugh as applied to claim 18 above, in view of applicant admitted prior art (hereafter AAPA).

35. As to claim 19, Saulpaugh fails to specifically disclose an injector process within the memory. However, AAPA states that the injector program is well known in the prior art [AAPA, PG Publication 2004/0010590, paragraph 22]. Therefore, the prior art teaches the system further comprising an injector process within the memory, the injector process operable to launch the mobile agent object in the mobile-agent runtime environment. It would have been obvious to use an injector in combination with the disclosure of White and Saulpaugh because White and Saulpaugh do not restrict the way a program can be launched and this is an existing technique.

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 7,080,078, 6,970,869, 6,868,447 to Slaughter et al., U.S. Patent No. 6,850,979 to Saulpaugh et al. teach process migration and services/objects discovery.

Response to Arguments

37. Applicant's arguments filed 3/27/08 have been fully considered but are not persuasive.

Regarding claim 1, applicant's arguments with respect to the newly added limitation as a whole are moot in view of the new ground of rejection necessitated applicant's amendment.

Regarding claim 8, this argument was addressed in the office action dated 12/27/07 and maintain herein. Applicant argues Saulpaugh fails to teach detecting requests, creating audit events and a logging database as claimed. However, Saulpaugh teaches creating a log in response to tracking use of services [col. 27 lines 8 - 18]. When a service is requested, an event must be created and added to the log to keep the log updated in order to implement the teachings of Saulpaugh.

38. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571)272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Qing-Yuan Wu/
Examiner, Art Unit 2194

/Li B. Zhen/
Primary Examiner, Art Unit 2194